



UNITED STATES PATENT AND TRADEMARK OFFICE

m^r/

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/072,039 | 02/05/2002 | Oliver Schreck | P02,0018 | 3794 |

26574 7590 10/20/2004

SCHIFF HARDIN, LLP
PATENT DEPARTMENT
6600 SEARS TOWER
CHICAGO, IL 60606-6473

| |
|----------|
| EXAMINER |
|----------|

ROY, BAISAKHI

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3737

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,039

Applicant(s)

SCHRECK, OLIVER

Examiner

Baisakhi Roy

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/4/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "B" has been used to designate both "image" and "non-stimulated phase". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brand et al. (6768915) in view of Jesmanowicz et al. (5603322)

Art Unit: 3737

4. Regarding claims 1, 2, 4, 6, 7, and 14, Brand et al. teaches a method and apparatus for functional MRI including obtaining and storing a plurality of images with and without stimulation (e.g. Claims 1 & 7) together with information indicating whether the image was registered with or without stimulation (such as eyes open or closed, col. 3, lines 51-67) and with at least one image related stimulation value such as the type of stimulation (col. 5, lines 40-50) and information describing a point in time of said stimulation (claim 6, col. 4, lines 32-47). Brand et al. however does not explicitly address an "image-related correlation value". Jesmanowicz et al. demonstrates in a functional MRI system that it is well known to determine "image-related correlation values" or images wherein points of highest intensity correspond to points of highest correlation or coincidence (col. 3, lines 6-18 and claim 1). It would have therefore been obvious to one skilled in the art to use "image-related correlation values" as taught by Jesmanowicz et al. in the invention as taught by Brand et al. for the purpose of improving image quality and to better differentiate between activated and non-activated brain regions.

5. Regarding claims 3, 9-11, and 13 Brand et al. teaches a method and apparatus for triggering a neural activity by a stimulus or sensory stimulator which could be in the form of an optical stimulation, an acoustic stimulation, and a pressure-exerting stimulation source (col. 5, lines 40-67) where the stimulation value represents the brightness of the light source, volume of the acoustic source, and the pressure exerted by a pressure source.

Art Unit: 3737

6. Regarding claims 5 and 15, Brand et al. teaches a method and implementation of the method in an apparatus for evaluating a plurality of images which includes some images which should be ignored in the evaluation and only those image datasets are further processed that are distinctly related with the reaction of the subject (col. 2, lines 37-51).

7. Claim 8 is rejected as being unpatentable over Brand et al. in view of Jesmanowicz et al. as set forth above and further in view of Apkarian et al. (6018675). Brand et al. describes various types of stimulation sources but he does not explicitly address the intensity level of the applied stimulus. Apkarian et al. teaches a device and methodology for fMRI for the purpose of applying variable levels of intensity of a stimulus to a subject or a stimulation value comprising information describing the intensity of a sensory stimulation by a stimulator over time (e.g. Abstract and Claims 4, 5, 9-12). It would have therefore been obvious to one of ordinary skill in the art to use the variable intensity stimulus teaching by Apkarian et al. in the invention as taught by Brand et al. for the purpose of measuring a subject's response to variable intensity levels of a stimulus.

8. Claim 12 is rejected as being unpatentable over Brand et al. in view of Jesmanowicz et al. as set forth above and further in view of Heid (5662112). Brand et al. teaches various sensory stimulations but he does not explicitly address an electrical stimulation source. Heid teaches a method and apparatus where the sensory stimulator is an electrical stimulation source and can be used as a stimulation function (col. 2, lines 50-55). It would have therefore been obvious to one of ordinary skill in the art to use the

Art Unit: 3737

electrical stimulation source in Heid in the invention taught by Brand et al. as a sensory stimulator to represent the pulse intensity of an electrical pulse emitted by the electrical source.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baisakhi Roy whose telephone number is 703-305-0930. The examiner can normally be reached on M-F (7:30 a.m. - 4p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 703-308-3552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BR


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700